

Application No. 10/697,664
Amendment dated February 25, 2008
Reply to Office Action of August 24, 2007

REMARKS

Applicant has cancelled claims 40-43, and has amended claims 1-7, and 23-39 to further define Applicant's invention.

Please note that Applicant's Responses of August 8 and 16, 2007 include typographical errors regarding two elements of U.S. Patent No. 6,311,761 to Steininger et al. ("the Steininger reference"). A cup-shaped head (71) and a tubular fitting (37) of the Steininger reference were both incorrectly referred to with the numeral 17. Applicant apologizes for any confusion caused thereby.

In the Office Action, the Examiner rejected claim 41 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As claim 41 has been cancelled, Applicant submits that the rejection thereof under 35 U.S.C. § 112, second paragraph, has been mooted.

The Examiner rejected claims 1-7 and 23-43 (including independent claims 1, 23, and 30) under 35 U.S.C. § 103(a) as being unpatentable based on U.S. Patent No. 6,311,761 to Steininger et al. ("the Steininger reference"). In rejecting independent claims 1, 23, and 30 under 35 U.S.C. § 103(a), the Examiner indicates that each of the various components of a "ball and socket" adapter of the Steininger reference including an annular body (15), a tubular fitting (37), a ball end (39), and a shank (43) can be considered an adapter. Furthermore, because the cup-shaped head (71) of the Steininger reference is made of beryllium copper, the Examiner argues that it would have been obvious to also make the components of the "ball and socket" adapter of beryllium copper to apparently obtain various advantages. According to the Examiner, the advantages of using beryllium copper include its excellent thermal conductivity and mechanical strength, and having the same thermal expansion coefficient for the various components of the "ball and socket" adapter of the Steininger reference.

In response to the Examiner's rejection of independent claims 1, 23, and 30 under 35 U.S.C. § 103(a) based on the Steininger reference, these independent claims

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have been amended to recite "an assembly comprising a plunger tip, and a unitary adapter...maintaining said plunger tip and said plunger rod in fixed relation to one another." The Steininger reference discloses the "ball and socket" adapter including various components at one end contacting the cup-shaped head (71), and at the other end contacting a plunger rod (3). According to the Steininger reference, "the body 15 with head 71 thereon (attached to the forward end of the plunger rod 3) is articulated on fitting 37 by means of the ball and socket mount for self-alignment thereof in the shot sleeve 5 (stated another way, for misalignment correction)." (the Steininger reference, col. 4, lines 34-38). The Steininger reference teaches that the "ball and socket" adapter is provided for articulation between the cup-shaped head (71) and the plunger rod (3) within the shot sleeve (5). Therefore, unlike independent claims 1, 23, and 30, the Steininger reference does not disclose an adapter for maintaining a plunger tip and a plunger rod in fixed relationship with one another, but instead teaches the opposite. As such, the Steininger reference teaches away from the present invention as claimed in independent claims 1, 23, and 30, and Applicant submits that the rejection thereof under 35 U.S.C. § 103(a) cannot be maintained.

Applicant also submits that the rejection of independent claims 1, 23, and 30 under 35 U.S.C. § 103(a) cannot be maintained because the Steininger reference does not teach or suggest using beryllium copper for the "ball and socket" adapter thereof, let alone the adapter recited in these independent claims. The Steininger reference only indicates that beryllium copper was used for the cup-shaped head (71), not the various components of the "ball and socket" adapter. Moreover, the Examiner's arguments in support of the rejection of independent claims 1, 23, and 30 are not consistent with both the properties of beryllium copper, and Applicant's discussions with the listed inventors of the Steininger reference regarding practice thereof.

According to the Examiner, "if the tip (71) [properly referred to as the cup-shaped head (71)], which contacts molten metal directly and thus experiences more severe environment (sic), can be made of beryllium copper alloy, there is no reason why the

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adapter (15, 37, 39, 43), which experiences less severe environment (sic), can not be made of beryllium copper alloy." Therefore, according to the Examiner, the properties of beryllium copper allowing it to withstand the environment encountered by the cup-shaped head (71) would be identical to the properties necessary to allow the "ball and socket" adapter to function properly in its environment. However, contrary to the Examiner's arguments, the properties necessary to withstand the environment encountered by the cup-shaped head (71) are different from the properties necessary to allow the "ball and socket" adapter to function properly in its environment.

The material selected for the cup-shaped head (71) must have properties able to withstand the heat and impact forces encountered during the casting process. However, to permit articulation between the cup-shaped head (71) and the plunger rod (3) within the shot sleeve (5), the material selected for the "ball and socket" adapter must both facilitate movement of the ball end (35) within its corresponding socket, and withstand the forward and reverse motion thereof within the shot sleeve (5). As such, the properties necessary to allow the "ball and socket" adapter to function properly in its environment (i.e., mechanical properties) are different from the properties necessary to withstand the environment encountered by the cup-shaped head (71). Accordingly, the mechanical properties necessary for the "ball and socket" adapter control the selection of the material therefor.

Stainless steel and steel were used and considered for use, respectively, for the "ball and socket" adapter of the Steinger reference. (See Declaration of August 3, 2007). However, the mechanical properties of beryllium copper (e.g., mechanical strengths such as tensile and yield strength) are similar to those of the aforementioned steels used and considered for use for the "ball and socket" adapter. Accordingly, with regards to the mechanical properties thereof, beryllium copper does not necessarily offer an advantage over the aforementioned steels. Therefore, given the greater expense of beryllium copper in comparison to the aforementioned steels, Applicant submits that it would not have been obvious to use beryllium copper for the "ball and

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socket" adapter of the Steininger reference.

Furthermore, in Applicant's discussions with the listed inventors of the Steininger reference, the need to use alternative steels instead of stainless steel for the components of the "ball and socket" adapter was discussed, but beryllium copper was never mentioned as a workable alternative for the components thereof. (See Declaration of August 3, 2007). The similar mechanical properties of beryllium copper and the aforementioned steels, and the comparably greater expense of beryllium copper foreclosed on use thereof for the "ball and socket" adapter. The Declaration of August 3, 2007 is corroborated by communications, attached as Exhibits A-C, between the Applicant and one of the listed inventors regarding the "ball and socket" adapter referred to with the name "Trueshot."

Exhibit A outlines Applicant's relationship with the listed inventors of the Steininger reference. Furthermore, Exhibit B shows that new materials from a steel supplier were being considered for components of the "ball and socket" adapter due to failure thereof. Finally, Exhibit C illustrates that the "ball and socket" adapter of the Steininger reference was a commercial failure. Therefore, in practice, the aforementioned steels (not beryllium copper) were used and considered for use as the components of the "ball and socket" adapter. Therefore, the Examiner's arguments in support of the rejection of Independent claims 1, 23, and 30 are not consistent with Applicant's discussions with the listed inventors of the Steininger reference regarding practice thereof. As such, Applicant again submits that it would not have been obvious to use beryllium copper for the "ball and socket" adapter of the Steininger reference. Accordingly, the Steininger reference does not teach or suggest using beryllium copper for the adapter recited in independent claims 1, 23, and 30, and the rejection thereof under 35 U.S.C. § 103(a) based on the Steininger reference cannot be maintained.

In conclusion, Applicant submits that independent claims 1, 23, and 30 are patentable and that dependent claims 2-7, 24-29, and 31-39 dependent from independent claim 1, 23, or 30, or claims dependent therefrom, are patentable at least

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due to their dependency from an allowable independent claim. Therefore, in view of the foregoing remarks, Applicant submits that the claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Dated: February 25, 2008

By: Thomas H. Martin
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QUALITY YOU WILL RECOGNIZE

EXHIBIT A

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FEB 25 2008

October 4, 2000

Die Casting Concepts
169 Dew Ct.
St. Peters, MO 63376

Attn: Mr. Ron Steininger, Sr.

Dear Ron:

I am writing today for a couple of reasons, first of all is the quote that I received from our marketing people. Please notice in the attached quote, that the prices for the DDC logo are as he originally estimated. In addition, you can see the estimates for developing the marketing material. As you can see, this does not include the printing of the end product, which will also be very costly. However when Drew is finished, it will be very professional. He does excellent work.

My second reason for writing, is to run the commission numbers past you for approval. I have been discussing this with Jerry, and we have come up with some numbers that we feel will be acceptable to everyone, along with having enough money to motivate our reps into pushing for your product. We were thinking about the following:

NON-SHARED TERRITORIES

	<u>REP'S %</u>	<u>DDC %</u>	<u>HM %</u>
Trueshot steel components	10%	0%	15%
Trueshot plunger tips	8%	0%	Bal.
Standard plunger tips	6%	6%	Bal.

SPLIT TERRITORIES

	<u>REP'S %</u>	<u>DDC %</u>	<u>HM %</u>
Trueshot steel components	6%	6%	13%
Trueshot plunger tips	4%	4%	Bal.
Standard plunger tips	6%	0%	Bal.

Please remember that the above does not include the additional \$3 royalty that is to be paid to DDC.

Our thinking behind these numbers is that we want to share enough with the reps, that they will be motivated to sell. At the same time, Hildreth Mfg., will have a substantial amount of money involved through marketing, inventory, legal fees, etc... As you can

1657 CARBIDE DRIVE P.O. BOX 905 MARION OHIO 43302 /P/ 740.375.5832 /F/ 740.375.4950 • WWW.HILDRETHMFG.COM

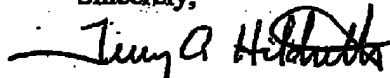
see, we are showing a larger commission for the tips associated with the Trueshot system than with our standard line. As discussed, this is because of us being in such a cutthroat industry with our standard line. However, between your system being patented, and wanting to give the reps motivation, these are the reasons for the numbers.

We feel that another reason that this works well is that everyone makes money. DDC makes money by being in the middle between HM and your tooling maker, and marking up the prices of the steel components. This is in addition to commissions and royalties. Plus, for all of the Trueshot systems that is sold in your exclusive area (Non-shared), DDC gets all of the money.

Upon reviewing these numbers, please let me know your thoughts. I am having my first meeting with one of our reps (Doug) tonight in Columbus to explain the opportunities. I also want to be in a position to be able to explain the commissions and the split territories. As you can imagine, this could possibly be a touchy subject because of the work that Doug has already put into landing accounts such as Briggs & Stratton in Missouri. However, if I am able to convince him that everybody wins, I feel that it will go smoothly.

I look forward to hearing from you.

Sincerely,



Terry A. Hildreth

EXHIBIT B

DIE CASTING CONCEPTS, L.L.C.
169 Dew Ct.
St. Peters, MO. 63376
(636) 970-6600
(636) 278-1817 FAX

November 9, 2000

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FEB 25 2008

Terry Hildreth
Hildreth Mfg.
1657 Cascade Drive
Marion, Ohio 43302

Dear Terry;

The enclosed prints are the most up to date prints for the TrueShot tips, please destroy all other prints.

These are the thread sizes we will use, Note: the "C" bore on each unit and the radius must be to the outside diameter of the thread. We need to ship (2) tips to Eric ASAP for test on the "B" size unit at Briggs Rolla.

We are meeting with our steel supplier and metallurgist at Homeyer Tool today to check out new material that may be used to keep from cracking. As you know we had a failure at Fasco with the "A" size unit and this is what we are investigating.

I am sending you your acrylic samples by UPS along with 2 of the tips received from you for the Fasco test as they need to have the radius moved to the outside of the thread. Please tell your sales people not to say anything bad about these units, as we are still in a testing stage.

I have not heard from you about our Sales Agreement, do you have any questions on it? I have also enclosed an up to date book of prints, please keep this for your information only.

Looking forward to hearing from you.

Sincerely,



Ron Steininger Sr.
President
Die Casting Concepts, L.L.C.

P.S.

I am also sending you the thread gauges for the A & B Units go and no go gauges



EXHIBIT C

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FEB 25 2008

FACSIMILE TRANSMITTAL SHEET

TO: MR. RON STEININGER SR.	FROM: TERRY HILDRETH
COMPANY: DIE CASTING CONCEPTS	DATE: February 17, 2003
FAX NUMBER: 636.278.1817	TOTAL NO. PAGES INCLUDING COVER:
PHONE NO:	SENDER'S REFERENCE NO:
RE: R. E. PHELON / TRUESHOT	YOUR REFERENCE NO:

PLEASE CONSIDER THIS TRANSMISSION CONFIDENTIAL

Dear Ron,

I am writing in regards to the Trueshot system that was sold to R. E. Phelon. As you may remember, this unit was sold back in January 2002. They have just now returned the unit to us because it broke. This happened some time ago, however it has been laying in the tool room for about a year. I am certain that you know how this goes.

They only purchased 5 plunger tips for this unit from us, and returned all 5. Of these 5, 4 still have our stickers and protective coating on them. This means that the ball driver broke on the very first tip.

Naturally they are wanting me to issue them a credit for this system, and since they are a good customer of ours, I am doing so.

We now have two issues, one is that I am forwarding this unit back to you. We purchased this unit from you under our purchase order number 000777-00 on November 20, 2001. The total was for \$821.25. I would appreciate being reimbursed for this. I have had to eat the cost of the tips that went with it.

In addition, as you know from my previous fax, it appears as though the Trueshot infringes on the patent rights of W Fischer from Brazil. I am certain that you understand how serious this is. I have known of people that have lost companies over lawsuits from litigation for patent infringement.

This brings up another issue. I issued a check to you for \$2365 for payment towards components of the Trueshot. These include the acrylic prototypes and thread gauges. Based on the fact that if I were to sell or promote the Trueshot, I could also be included in litigation, I also want to return all of this to you for reimbursement. Naturally these components are of no use to me under the current circumstances.

I believe that if we are all lucky and stop now, possibly W Fischer will not find out about the patent infringement and we may all be able to avoid litigation.

I will be shipping the Trueshot to you today.

If you have any questions, please let me know.

Sincerely,

Terry

PLEASE CONSIDER THIS TRANSMISSION CONFIDENTIAL

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